

West Nile Virus Newsletter

Zoonotic Disease Program, Washington State Department of Health

August 10, 2005

Volume 3, Issue 10

Purpose

To keep our partners and other interested entities informed about West Nile virus.

In This Issue

National, northwest, and state surveillance

Imported horses found to have WNV

WNV's "cousin" SLE is detected in Benton County

Blood screening effective

World's first licensed DNA vaccine achieved

Journal articles from *Emerging Infectious Diseases*

Previous Issue

National, northwest, and state surveillance

Spokane-area woman's blood test is negative for WNV

Research: WNV devastates a crow population

WNV can have long-lasting repercussions

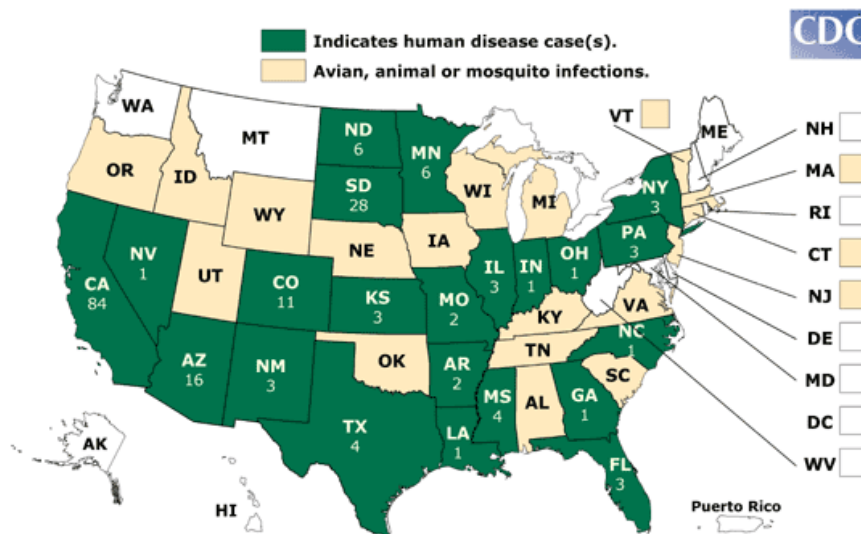
View the [July 27](#) issue

Subscribe, Submit Articles, Suggestions

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West Nile Virus Activity in the United States

(Reported to CDC as of August 9, 2005)



National maps and data available at

<http://www.cdc.gov/ncidod/dvbid/westnile/surv&control.htm>.

West Nile virus found in Snohomish County horses brought in from California

OLYMPIA – West Nile virus has been confirmed in two horses in Snohomish County, the state Department of Agriculture announced today (July 28). The horses, a mare and a foal, were imported from Europe and placed in a holding facility in California. It is thought the horses, which are now recovering, acquired the West Nile virus infection while in California. They arrived in California in June and were transported up to Washington in mid-July.

The positive test results were reported by the Washington Animal Disease Diagnostic Laboratory in Pullman.

“This is a reminder that horse owners in Washington should vaccinate their horses,” said Dr. Leonard Eldridge, state veterinarian. “We’re already into the mosquito season, but now may still be a good time to act because the vaccine requires two doses three to six weeks apart, and immunity will not be achieved until five weeks after the second vaccine.

View the complete Washington State Department of Agriculture news release at <http://agr.wa.gov/News/2005/05-34.htm>.

WNV Web Resources

Washington State
Department of Health
www.doh.wa.gov/wnv

Centers for Disease
Control and Prevention
www.cdc.gov/ncidod/dvb/id/westnile

US Geological Survey &
CDC ArboNET maps
<http://westnilemaps.usgs.gov/index.html>

Cornell University,
Environmental Risk
Analysis Program
<http://environmentalrisk.cornell.edu/WNV/>

Washington State
University Cooperative
Extension
www.wnv.wsu.edu

Washington State
Department of
Agriculture
www.agr.wa.gov/FoodAnimal/AnimalHealth/Diseases/WestNileVirus/default.htm

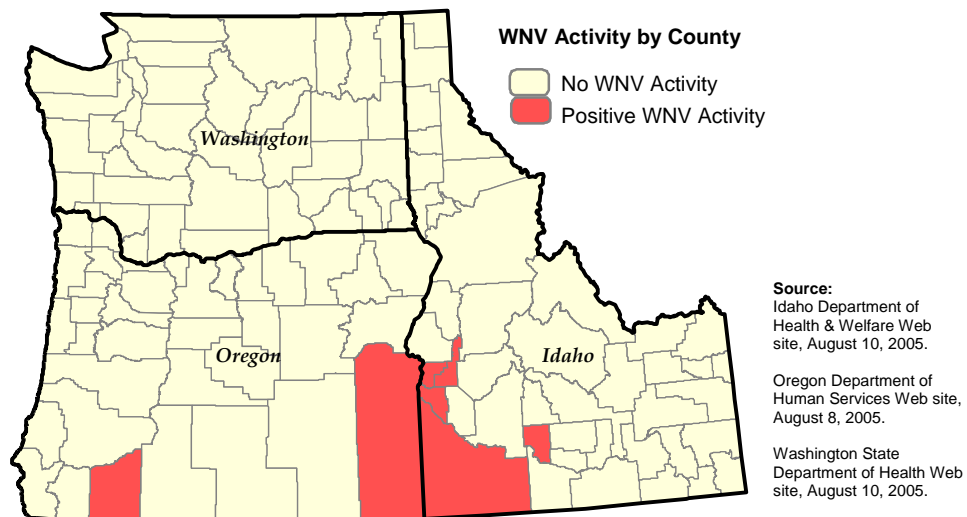
Northwest Links

Idaho Department of
Health & Welfare
www.westnile.idaho.gov

Oregon Department of
Human Services
<http://egov.oregon.gov/DHS/ph/acd/diseases/wnile/survey.shtml>

British Columbia Center
for Disease Control
www.bccdc.org

Northwest activity by county



In Oregon, three birds in Jackson County and one bird in Malheur County have tested positive for WNV. A [news release](#) on Oregon's first indication of WNV in 2005 is available at the Oregon Department of Human Services Web site.

Idaho has detected WNV in Canyon, Gooding, Owyhee, Gem, and Payette Counties. Four horses, two birds, and four mosquito pools have tested positive.

Benton County Mosquito Control District detects St. Louis encephalitis in chicken flock

Testing by the Benton County Mosquito Control District has detected St. Louis encephalitis in one of its five sentinel chicken flocks. The district uses various testing methods to monitor virus activity in much of Benton County and parts of Yakima County. The surveillance program is an early warning system for both the public and the Mosquito Control District.

The surveillance program uses sentinel chicken flocks, adult mosquitoes and birds to test for disease. Early detection benefits people by alerting them to the presence of virus and raising public awareness. It also benefits the district by providing additional information on where to focus abatement efforts.

James Henriksen, District Manager of Benton County Mosquito Control said, "Our monitoring program gives us a head start in the field by indicating what areas need greater attention, thereby slowing or even stopping the mosquitoes before they reach people." Dr. Larry Jecha of the Benton-Franklin Health Department stated that, "This early detection means that we have the St. Louis encephalitis (SLE) virus in our bird population. The virus can only be spread to a human by a bite from an infected mosquito. We have been educating the public on how to protect themselves from West Nile virus (WNV) and these same procedures are effective for SLE."

Read the entire press release at Benton County Mosquito Control District's Web site <http://www.mosquitocontrol.org/press7.28.05.html>.

Mosquito Focus



CDC-PHIL

Culex tarsalis is probably the most widespread mosquito species in Washington, found in nearly all counties.

Larvae develop in a variety of permanent and semi-permanent waters such as log ponds, storm water ponds, ditches, marshes, pools in grasslands and woodlands, and in clean or polluted water. Larvae are also found in artificial containers such as tires, tin cans, and ornamental ponds.

Mated females may hibernate over winter and emerge in early spring.

Cx. tarsalis prefers to feed on people, domesticated animals, and birds.

It has a reported flight range of over ten miles.

Primarily an evening and early morning biter, this species is the most important vector of western equine encephalitis and St. Louis encephalitis. It has become one of the predominant vectors of WNV in the Western United States.

Blood screening helps West Nile fight

NEW YORK – Screening blood donations for the West Nile virus to prevent its spread has proved remarkably effective, though a few contaminated units have been missed, according to reports on the first two years of testing.

The nation's blood supply has been screened for West Nile virus since the summer of 2003, after it became apparent that the mosquito-borne illness could be passed on through transfusions.

Since then, West Nile infections have been found in 1,039 of the 27 million blood donations screened, according to the Centers for Disease Control and Prevention. That means about 1,500 transfusions of tainted-blood products were prevented, said the CDC's Dr. Lyle Petersen.

"Screening has markedly improved the safety of the blood supply. There remains a small residual risk, but it's very, very small," Petersen said.

He estimated that screening has reduced the risk of getting an infection through a blood transfusion by 90 percent. The virus that is missed is present in very low levels, he said.

View the entire Associated Press article at
<http://www.cnn.com/2005/HEALTH/conditions/08/04/west.nile.ap/>.

CDC and Fort Dodge Animal Health achieve first licensed DNA vaccine

Scientists at the Centers for Disease Control and Prevention (CDC), in collaboration with Fort Dodge Animal Health, an animal biologics and pharmaceutical company, have developed the world's first licensed DNA vaccine. The vaccine, which protects horses from West Nile virus, was licensed by the U.S. Department of Agriculture (USDA) this week. The technology could serve as a basis for future development of human vaccines.

"This is truly an exciting innovation ... that has potential benefits far beyond preventing West Nile virus in horses."

--CDC Director Dr. Julie Gerberding

The scientific approach used in DNA vaccines differs in a number of important ways from traditional vaccine development. Traditional vaccines, such as those used to protect people from yellow fever, polio, measles or hepatitis, involve using a disease-producing virus that has been weakened or killed. The weakened or killed virus contained in the vaccine is not able to cause the illness, but it is able to cause the body to develop immunity, or protection, against the disease. In contrast, DNA vaccines use carefully selected small pieces of the virus's genetic material that stimulate the vaccine recipient's body to develop protective immunity.

Read the complete CDC press release at
<http://www.cdc.gov/od/oc/media/pressrel/r050718.htm>.

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Tom Gibbs
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Aquatic Mosquito Control Permit

Ben Hamilton
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WNV in Humans

Local Health Jurisdiction
or
DOH Communicable
Disease Epidemiology
206-418-5500 or
877-539-4344

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Journal articles

Centers for Disease Control and Prevention, Emerging Infectious Diseases, Volume 11, Number 8 – August Issue

Epidemiology and Transmission Dynamics of West Nile Virus Disease, E.B. Hayes et al.

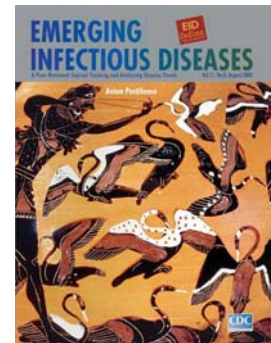
<http://www.cdc.gov/ncidod/eid/vol11no08/05-0289a.htm>

Virology, Pathology, and Clinical Manifestations of West Nile Virus Disease, E. B. Hayes et al.

<http://www.cdc.gov/ncidod/eid/vol11no08/05-0289b.htm>

West Nile Virus Detection in Urine, J.H. Tonry et al.

<http://www.cdc.gov/ncidod/eid/vol11no08/05-0238.htm>



Washington non-human surveillance summary

(Reported to DOH as of August 9, 2005)

County	Horses* [†]		Birds**		Sentinel Flocks***		Mosquito Pools****	
	Tested	Positive	Tested	Positive	Tested	Positive	Tested	Positive
Adams	0	0	1	0	0	0	0	0
Asotin	0	0	2	0	0	0	0	0
Benton	0	0	19	0	266	0	0	0
Chelan	0	0	3	0	0	0	0	0
Clallam	0	0	1	0	0	0	0	0
Clark	1	0	5	0	0	0	0	0
Columbia	0	0	0	0	0	0	0	0
Cowlitz	0	0	3	0	0	0	18	0
Douglas	0	0	1	0	0	0	0	0
Ferry	0	0	1	0	0	0	0	0
Franklin	0	0	2	0	0	0	0	0
Garfield	0	0	0	0	0	0	0	0
Grant	0	0	2	0	0	0	0	0
Grays Harbor	0	0	8	0	0	0	0	0
Island	1	0	20	0	0	0	0	0
Jefferson	0	0	5	0	0	0	7	0
King	2	0	52	0	0	0	0	0
Kitsap	0	0	0	0	0	0	71	0
Kittitas	0	0	5	0	0	0	0	0
Klickitat	1	0	3	0	0	0	0	0
Lewis	0	0	9	0	0	0	0	0
Lincoln	0	0	0	0	0	0	0	0
Mason	0	0	6	0	0	0	0	0
Okanogan	0	0	2	0	0	0	0	0
Pacific	0	0	1	0	0	0	0	0
Pend Oreille	1	0	0	0	0	0	0	0
Pierce	0	0	39	0	0	0	42	0
San Juan	0	0	1	0	0	0	0	0
Skagit	1	0	12	0	0	0	0	0
Skamania	0	0	1	0	0	0	0	0
Snohomish	6	0	26	0	0	0	0	0
Spokane	2	0	15	0	0	0	0	0
Stevens	1	0	5	0	0	0	0	0
Thurston	0	0	23	0	0	0	0	0
Wahkiakum	0	0	0	0	0	0	0	0
Walla Walla	1	0	6	0	0	0	0	0
Whatcom	0	0	4	0	0	0	0	0
Whitman	1	0	6	0	0	0	0	0
Yakima	1	0	12	0	70	0	21	0
Totals	19	0	301	0	336	0	159	0

*A total of 26 horses have been tested for West Nile virus with negative results. Seven were not included in the table because county/state information was not available. WADDL Report Dated: August 2, 2005.

[†]WNV positive acquired in state.

**A total of 309 birds have been submitted for West virus testing of which 8 birds were unsuitable and not tested for West Nile virus. USGS Report Date: July 29, 2005 and WADDL Report Date: August 8, 2005

***Benton County MCD Report Dated: August 2, 2005

**** Mosquito pools tested by USACHPPM-West Report Date: August 5, 2005 (Week #21 and 22) and Cowlitz County MCD Report Date: July 25 and 27, 2005